

ABSTRACT

A chemical moiety including a polymer (P), a first tethering element (T), a ligand (L) which is a specific sequence of PNA, a second tethering element (T') and a quencher (Q) is disclosed. In the absence of a complement to the PNA sequence, the PNA is in a tightly coiled configuration, thereby quenching the polymer due to the close proximity of the quencher to the polymer. When a receptor is added that recognizes the PNA sequence, a hybridization of the PNA sequence separates the polymer and the quencher, resulting in an increase of detected fluorescence. The same chemistry is advantageously employed in a competitive assay. A method for detecting nucleic acids in a target sample using the PTLT'Q molecule is also disclosed.

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